Burden of Arthritis in South Carolina

ACKNOWLEDGEMENTS

The South Carolina Arthritis Prevention and Control Program gratefully acknowledges:

Hylan D. Shoob, PhD, MSPH for writing the first draft of the report and developing the charts.

Appreciation is also extended to the following individuals at the South Carolina Department of Health and Environmental Control who contributed to this report:

Patsy Myers, RD, MS, DrPH and Cora Plass, ACSW, LISW for their contributions to the text and for formatting and editing the report.

Beli Dong, MD, MSPH for data analysis.

Gwendolyn Prestidge, ACSW, LISW for her input and suggestions.

Donald Goodwin, MS, DrPH and Michael D. Byrd, MSW, MPH for their overall support of this project.

Kris Black for the cover and internal design.

In addition, we gratefully acknowledge the following individuals for their earlier contributions to the program, which made this report possible:

Julie Lumpkin, BA, South Carolina Department of Health and Environmental Control Melody Crocker-MacRae, MSW, LISW Youjie Huang, MD, DrPH Manxia Wu, MD, MPH

Funding for the SC Arthritis Prevention and Control Program and for this report is provided by the Centers for Disease Control and Prevention.

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Executive Summary

Arthritis affects 70 million Americans or 1 out of every 3 adults, and it is the leading cause of disability in the United States. While the social and economic impact of arthritis is enormous, no national unified plan existed to address arthritis until 1998.

In November 1998, a national plan for arthritis was developed under the leadership of the Centers for Disease Control and Prevention, the Arthritis Foundation, and the Association of State and Territorial Health Officials, with input from many other organizations. The National Arthritis Plan led to the inclusion of arthritis objectives in Healthy People 2010, the health objectives for the nation, and to the development of state programs to address arthritis at the state and local levels.

In 1999, the CDC awarded the South Carolina Department of Health and Environmental Control (DHEC) funds to establish a state arthritis program. The South Carolina Arthritis Prevention and Control Program was created to provide a statewide focus on arthritis as a major public health problem in South Carolina.

One of the first objectives of the program was to develop a state plan, which would offer guidance and direction to the program. A steering committee, with representatives from the Arthritis Foundation, state and private agencies, universities, consumers, health care providers and other interested parties, was formed to develop *The State Plan for Arthritis Action in South Carolina*, 2000-2005. This plan was the state's first organized effort to develop a population-based response to arthritis.

Since its inception, the South Carolina Arthritis Prevention and Control Program has worked in partnership with the Arthritis Foundation and other organizations throughout the state to reduce the burden of arthritis in SC. Currently, over 30% of South Carolina adults are affected by arthritis, and 10% of those affected have some type of activity limitation. Resources and services are sparse, and there is a general lack of knowledge about what can be done to prevent arthritis and about how to improve the quality of life for those who have arthritis. The program is working to increase public awareness of the prevention, screening, and appropriate management of arthritis in an effort to lessen the burden in SC. Additionally, the program is working with its many partners to increase the availability of services throughout the state in order to address this important public health problem.

The data in this report represents a baseline against which future trends can be compared. As additional data becomes available, it will be posted on our website at http://www.scdhec.net/arthritis

Introduction

Arthritis affects nearly 70 million Americans, and is the nation's leading cause of disability. It has a substantial effect on the quality of life of those who experience its painful and disabling symptoms. It also takes a tremendous toll on family members and caregivers.

Arthritis consists of over 100 different diseases and conditions that affect the joints, the surrounding tissues, and other connective tissues. Common symptoms include pain, achiness, stiffness, and swelling in or around the joints.

The 3 most common forms of arthritis and other rheumatic conditions are

- Osteoarthritis
- Rheumatoid Arthritis
- Fibromyalgia

Other forms include gout, lupus, juvenile rheumatoid arthritis, bursitis, tendonitis, Crohn's disease, reflex sympathetic dystrophy syndrome, and arthritis associated with infectious disease (Lyme disease, syphilis of the muscle, gonoccoccal infection of the joint, etc.).

Arthritis affects people of all ages and all racial and ethnic groups. However, it is more common in women and older Americans. It affects approximately 59% of people over age 65. This population is expected to more than double between 2000 and 2030, and the over-80 age group is already the fastest growing segment of the population. This demographic transition will lead to a substantial increase in arthritis over the next thirty years. The impact on health care and public health systems, social services, and family caregivers will be catastrophic unless some action is taken to mitigate this trend.

Definition of Arthritis

For definitional purposes, we will focus on the three most common forms.

Osteoarthritis is the most common kind of arthritis. It can affect several joints of the body, and most often affects the hip, knee, foot, and hand. It occurs when the cartilage lining of the joints wears away, causing the bones to rub together. This leads to pain, stiffness, inflammation, and loss of mobility.

Rheumatoid arthritis is a chronic inflammatory condition in which the body's immune system attacks cartilage, bone, and, sometimes, internal organs, usually causing joint disease. Chronic inflammation of the joint lining occurs, which may spread to other joint tissues resulting in bone and cartilage erosion, joint deformities, and movement limitations. Rheumatoid arthritis can affect the lungs and heart and can increase risk of death due to respiratory or infectious diseases.

Fibromyalgia is a pain syndrome that affects muscle and muscle attachments. The cause is unknown. Symptoms include widespread pain throughout the muscles, physical and mental fatigue, headaches, depression, irritable bowel syndrome, and sleep disorders.

The CDC defines people with arthritis as those who have either chronic joint symptoms (CJS) and/or doctor-diagnosed arthritis. People are considered to have CJS if they answered yes to both of the following questions on the Behavioral Risk Factor Surveillance System (BRFSS) survey:

- "During the past 12 months, have you had pain, aching, stiffness, or swelling in or around a joint?"
- "Were these symptoms present on most days for at least one month?"

People are considered to have doctor-diagnosed arthritis if they answered yes to the question, "Have you ever been told by a doctor that you have arthritis?"

Why is Arthritis a Public Health Problem?

Arthritis is one of the nation's most common diseases. It affects nearly 70 million Americans or about one out of every three adults. Older Americans are disproportionately affected, so arthritis is expected to increase dramatically as the population ages. This demographic transition will place a great challenge on the public health system. To lessen the burden, the public health system needs to expand prevention efforts and promote cost-effective, evidence-based interventions for those who have arthritis.

South Carolina falls in the mid range nationally regarding arthritis prevalence (Fig. N1).

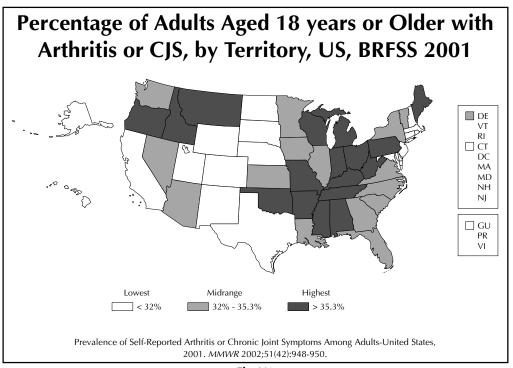


Fig. N1

Arthritis is the leading cause of disability in the United States (Figure N2), limiting everyday activities for more than 7 million Americans. Each year, arthritis results in 750,000 hospitalizations and 44 million outpatient physician visits (including emergency room visits).

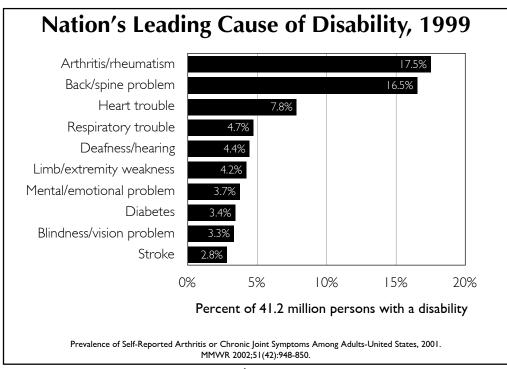


Fig. N2

In addition to the physical toll, the medical and societal costs of arthritis are enormous. Direct medical costs for arthritis and other rheumatic conditions exceeded \$51 billion in 1997. Among people aged 18-64, indirect costs from lost productivity were estimated at more than \$65 billion. During the same year, direct medical costs of arthritis in SC were estimated at \$757 million, and indirect costs were estimated at \$965 million, bringing the total estimated costs in South Carolina to \$1.722 billion.

Although cost-effective interventions are available, they are considerably underused. Public health efforts need to be expanded to promote self-management programs and practices that have been proven to be effective. Primary among these practices are physical activity, healthy weight maintenance and self-management education, such as the Arthritis Self-Help Course, an Arthritis Foundation program that teaches people with arthritis how to manage their condition more effectively.

Who Gets Arthritis?

Arthritis is not only an older person's disease. Arthritis affects young people and people of all racial and ethnic groups. About 3 out of every 5 people with arthritis are younger than 65 years old. However, the prevalence of arthritis increases with age, and this condition is more common among older Americans (Fig N3).

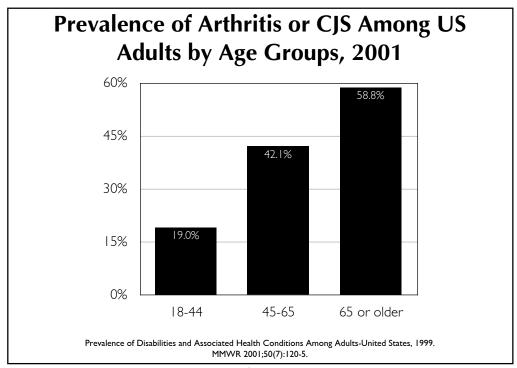


Fig. N3

How is the Burden of Arthritis Measured?

- The CDC uses the Behavioral Risk Factor Surveillance System (BRFSS) in all 50 states to collect health information about adults age 18 years and older on the risk factors and risk behaviors related to the major causes of morbidity and mortality.
- The BRFSS data are used to obtain state-specific arthritis data on prevalence, quality of life, activity limitation, and risk factors.
- Using the CDC case definition, people with arthritis are defined as those having either chronic joint symptoms (CJS) and/or doctor-diagnosed arthritis (DrDxArth).

Characteristics of People with Arthritis

Based on the BRFSS results, 33% of adults in the United States have arthritis. The prevalence is higher for women, increases with age, and decreases with education (Figures N4 - N6).

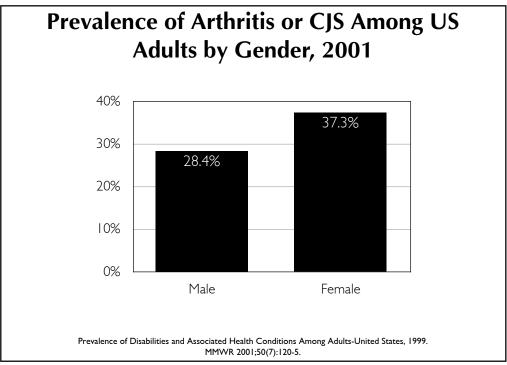


Fig. N4

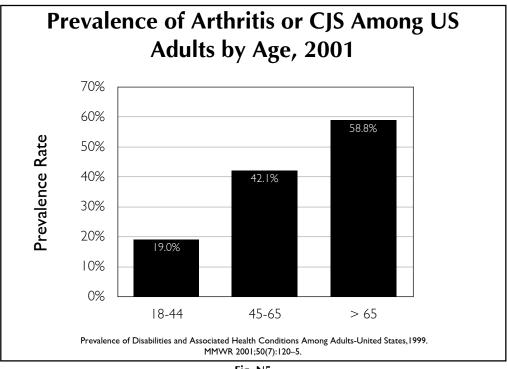


Fig. N5

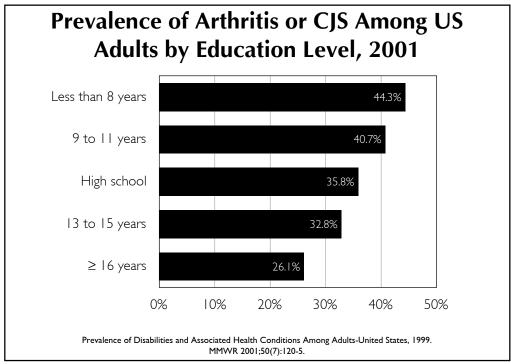


Fig. N6

Arthritis affects people of all racial groups. However, the prevalence of arthritis is higher among Whites, followed by African-Americans, and Hispanics (Fig. N7).

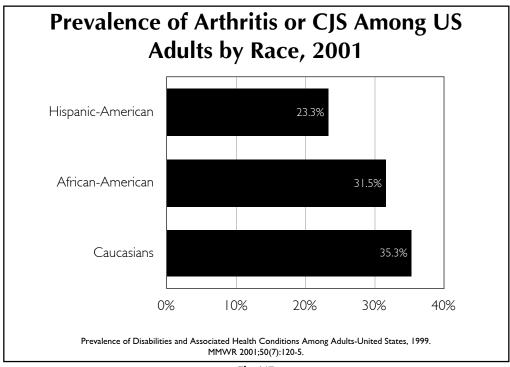


Fig. N7

People with arthritis tend to be inactive or have insufficient activity levels (Fig. N8).

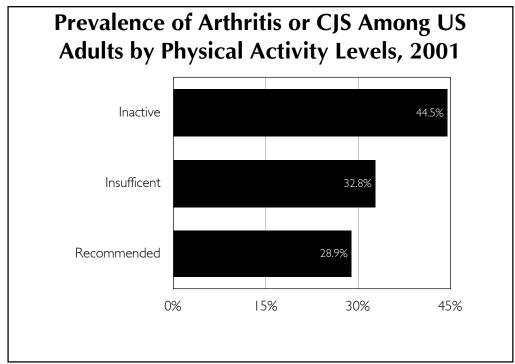


Fig. N8

People with arthritis tend to be overweight or obese (Fig. N9).

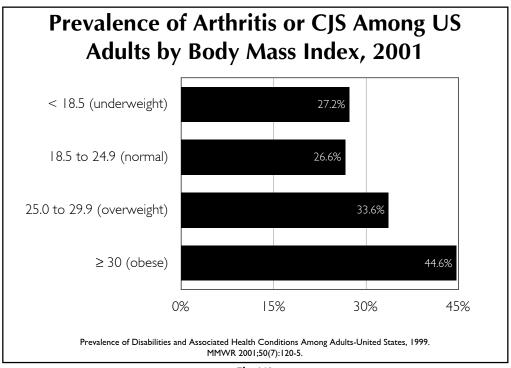


Fig. N9

Public Health Approach

In 1998, the first comprehensive public health approach to reducing the burden of arthritis in the US was released by the CDC, the Arthritis Foundation, and the Association of State and Territorial Health Officials, with input from more than 90 organizations.

The National Arthritis Action Plan (NAAP): The plan (www.cdc.gov/nccdphp/pdf/naap.pdf) proposed 3 major areas to reduce the impact of arthritis:

- Surveillance, epidemiology, and prevention research
- Communication and education
- Programs, policies, and systems

In order to reach population groups, the plan shifts the traditional emphasis on treating individuals with arthritis to a public health approach. The NAAP strategies include:

- Increase public awareness of arthritis as the leading cause of disability and an important public health problem
- Prevent arthritis whenever possible
- Promote early diagnosis and appropriate management for people with arthritis to ensure a maximum number of years of healthy life
- Minimize preventable pain and disability due to arthritis
- Support people with arthritis by developing and helping them access the resources they need to cope with their disease
- Ensure that people with arthritis receive the family, peer, and community support they need

South Carolina Arthritis Prevention and Control Program

Location

The South Carolina Arthritis Prevention and Control Program (SCAP) is a program of the South Carolina Department of Health and Environmental Control in partnership with the CDC, the Arthritis Foundation, and other organizations and consumers throughout South Carolina.

Program Goals

- Reduce the burden of arthritis in the state
- Reduce disability and pain due to arthritis and arthritis-related conditions
- Improve quality of life and promote optimal health for South Carolinians affected by arthritis

Basic Elements of the Program:

- A statewide focus for arthritis
- Arthritis Advisory Committee
- State Arthritis Plan of Action in SC

Science Elements

- Establish a surveillance system to monitor the burden of arthritis
- Incorporate arthritis module into the BRFSS
- Draw from additional arthritis-related BRFSS modules

Communication & Education Activities

- Fact sheets and reports on arthritis prevalence in SC
- Printed materials about prevention, screening, self-management, and the various forms of arthritis
- Arthritis education in the public health system and the general public
- CDC Physical Activity Campaign, a media campaign to promote physical activity

Evaluation

The South Carolina Arthritis Program lists overall program goals, five-year goals, and process objectives for each year. Measures of effectiveness for each objective and a detailed timeline have been developed. A comprehensive evaluation system is under development.

Partners

- Arthritis Foundation, Carolinas Chapter
- Arthritis Foundation Certified Aquatic Sites
- Arthritis Foundation, Low Country Region
- Arthritis Support Groups
- Certified Arthritis Self-Help Course (ASHC) Leaders
- People with Arthritis Can Exercise (PACE) Sites
- Prime Times
- South Carolina Arthritis Program (SCAP) Advisory Board
- South Carolina Budget and Control Board, Office of Research and Statistics
- South Carolina Department of Education
- South Carolina Department of Health and Environmental Control County Health Departments

- University of South Carolina, School of Public Health
- Wellspring Resource Center

South Carolina Arthritis Prevention and Control Program: Surveillance

Purpose

The purpose of gathering arthritis data is to determine the burden and impact of arthritis in South Carolina through a comprehensive local assessment.

Definition

Surveillance is defined as ongoing systematic collection, analysis, and dissemination of outcome-specific data for use in planning, implementation, and evaluation of public health practice. The BRFSS is the main type of surveillance in South Carolina.

Use of Arthritis Data Will:

- Provide a means to profile the overall health of the state population through comprehensive local assessments
- Provide guidance to public health professionals in planning local initiatives
- Influence funding and prioritization

BRFSS

The BRFSS is the largest continuously conducted telephone survey in the world. It enables CDC, state health departments, and other health agencies to monitor modifiable risk factors for chronic disease and other leading causes of death.

The survey is a series of monthly telephone surveys of randomly selected adults, age 18 and older. Results can identify demographic differences and trends in health-related behaviors, measure progress toward achieving state-specific objectives, and measure progress toward achieving the Year 2010 Health Objectives.

The survey was first administered in SC in 1984, is conducted on an on-going basis each year, and collects information about the risk factors and risk behaviors related to the major causes of morbidity and mortality in SC. The SC Department of Health and Environmental Control administers the BRFSS and analyzes the data.

Prevalence of Arthritis in South Carolina

Based on results from the 2000 and 2001 SC BRFSS, 31.4% (2000) and 33.5% (2001) of South Carolinians reported having arthritis (Fig SC1).

Using the CDC-recommended case definition for arthritis, people with arthritis were defined as those having either chronic joint symptoms (CJS) and/or doctor-diagnosed arthritis (DrDxArth).

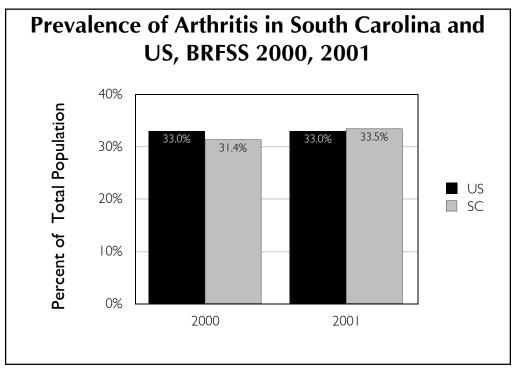


Fig. SC1

As seen in the following figures, the percentage of South Carolinians with arthritis was higher for women (Fig SC2), increased with age (Fig SC3), and decreased with higher educational levels (Fig SC4).

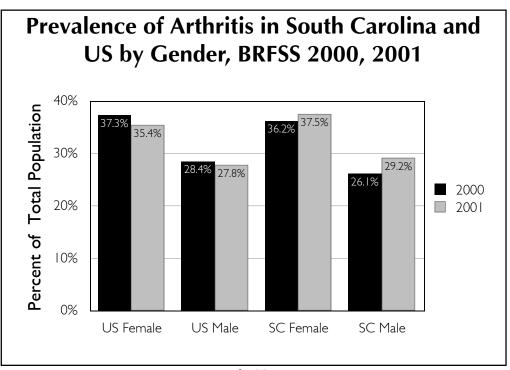


Fig. SC2

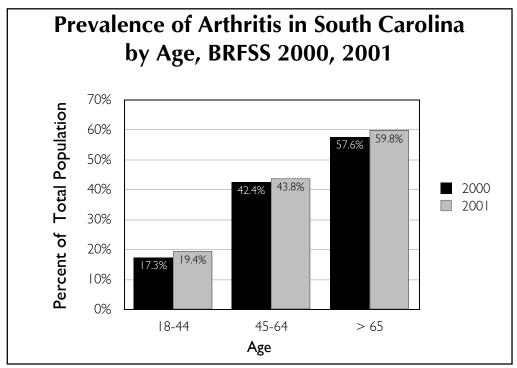


Fig. SC3

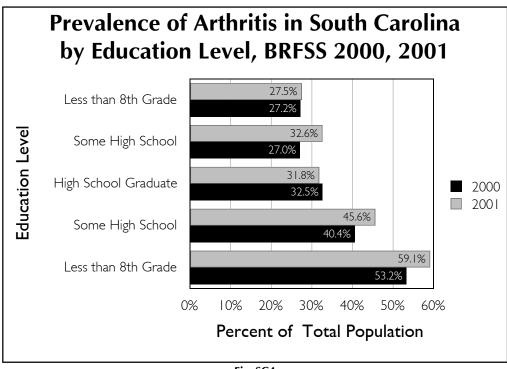


Fig. SC4

Prevalence of Arthritis in South Carolina by Race, BRFSS 2000, 2001 34.8% White, non-Hispanic 33.4% 29.6% Black, non-Hispanic 26.7% 2000 29.3% 2001 Hispanic 33.5% 40.2% Other 21.3% 0% 10% 20% 30% 40% 50% Percent of Total Population

Arthritis affects all racial groups in SC (Fig. SC5).

Fig. SC5

Effects of Arthritis on Physical and Mental Health in South Carolina

When asked about their health, people with arthritis reported a higher number of days of poor physical health and pain over the past 30 days than people without arthritis. People with arthritis also reported a higher number of days of poor mental health, depression, and anxiety (Fig. SC6).

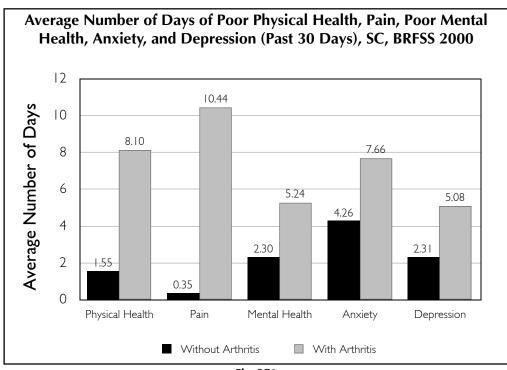


Fig. SC6

Activity Limitation Attributable to CJS in South Carolina

In people with CJS, an overall 10.2% had an activity limitation due to CJS in 2001 compared to 8.2% in 2000 (Fig. SC7). This rate was higher in females(Fig. SC8), higher in people 65 years of age and older (Fig. SC9), higher in those with less than an 8th grade education (Fig. SC10), and similar in Whites, African-Americans, and Hispanics (Fig. SC11).

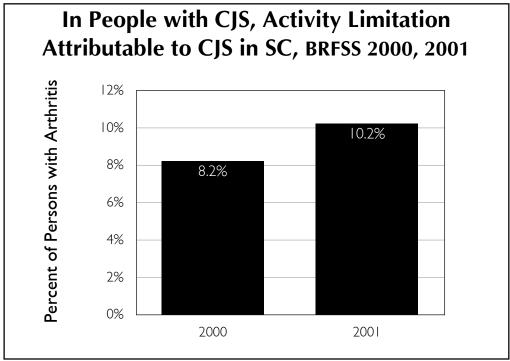


Fig. SC7

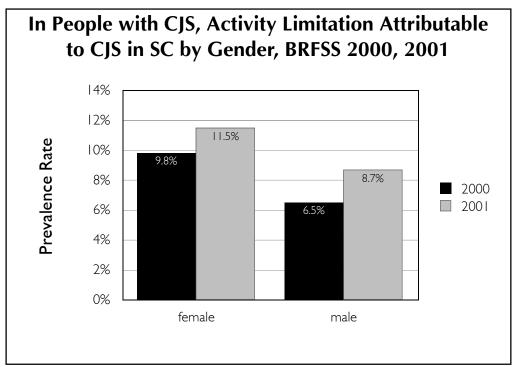
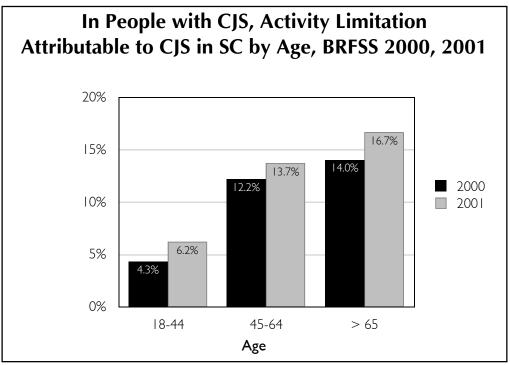


Fig. SC8





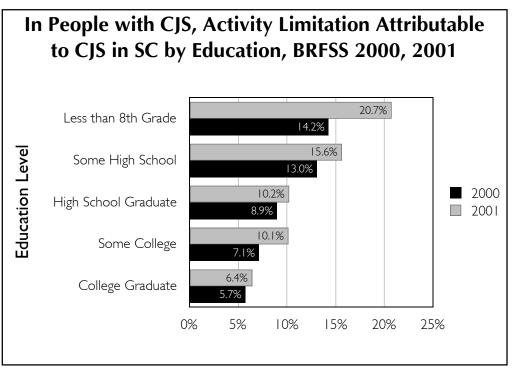


Fig. SC10

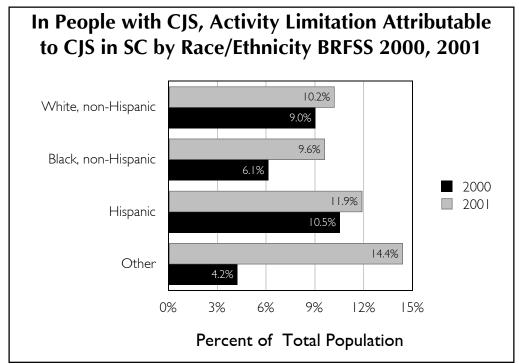


Fig. SC11

People in South Carolina Whose Doctors Told Them They Have Arthritis

In South Carolinians with CJS, an overall 24.1% had been told by their doctors that they have arthritis. This rate was higher in females (Fig. SC12), higher in people age 65 years and older (Fig. SC13), higher in those with less than a high school education (Fig. SC14), and is similar in Whites and African-Americans (Fig. SC15).

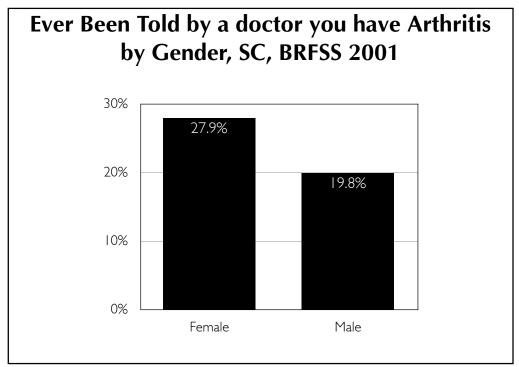


Fig. SC12

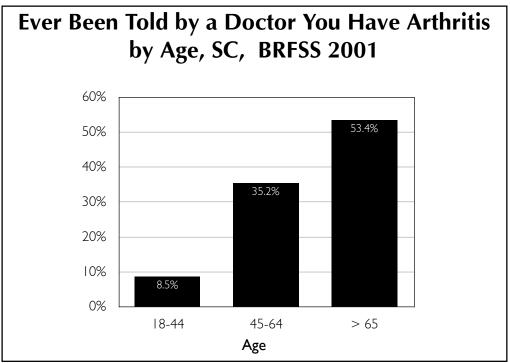


Fig. SC13

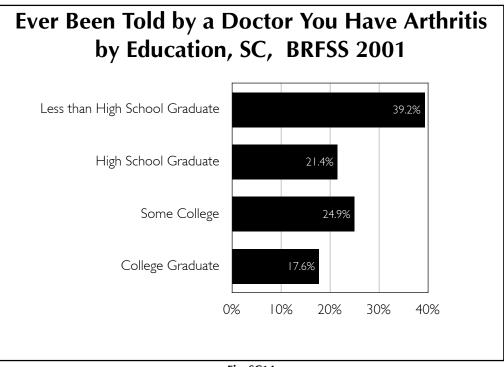


Fig. SC14

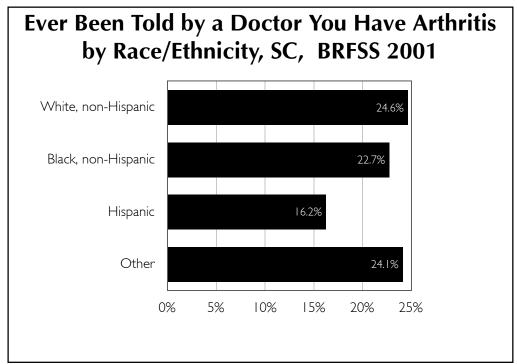


Fig. SC15

People in South Carolina Currently Being Treated By A Doctor For Arthritis

In people with CJS, an overall 46.9% are currently being treated by a doctor for arthritis. This rate is higher in females (Fig. SC16), higher in people aged 65 years and older (Fig. SC17), higher in those with a high school education (Fig. SC18), and higher in African-Americans (Fig. SC19).

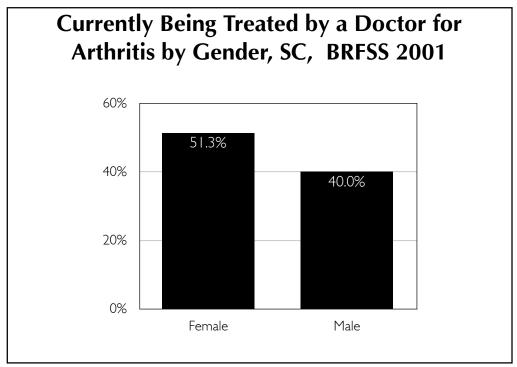


Fig. SC16

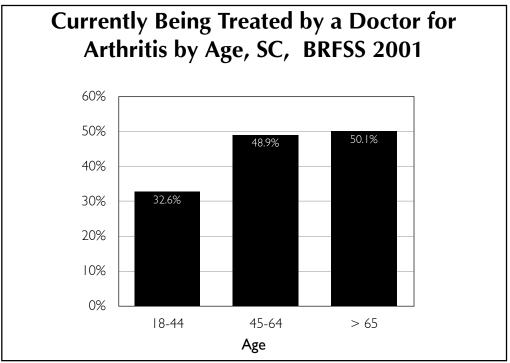


Fig. SC17

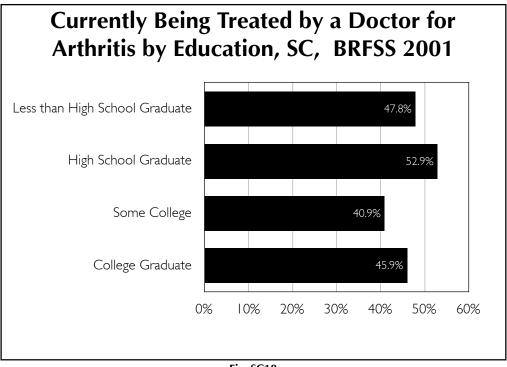


Fig. SC18

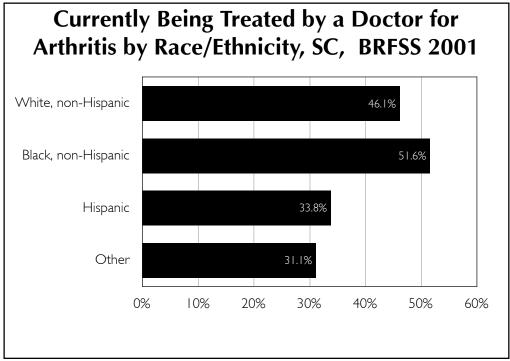


Fig. SC19

Access to Health Care in South Carolina

Approximately 152,000 people, or 22.3% of South Carolinians with CJS, have never been seen by a health-care provider (doctor, nurse, or other medical personnel) for CJS (Fig. SC20).

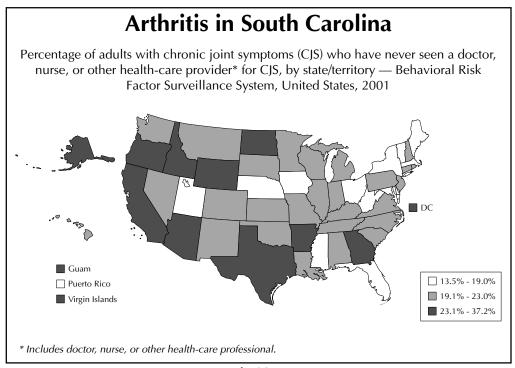


Fig. SC20

Lack of health insurance and having no physician were strongly associated with not seeing a health care provider for CJS.

Other possible explanations for low utilization of medical services include:

- The belief that arthritis is a normal part of the aging process
- Lack of knowledge about effective interventions
- The possibility that people not seeking medical care may have milder forms of the disease and use self-treatment
- Particularly in rural areas, the lack of transportation, along with fewer health care specialists

Arthritis in South Carolina: Conclusion

- Arthritis is one of the most common causes of disability and diminished quality of life in South Carolina.
- People with arthritis reported a higher number of days of poor mental and physical health and activity limitation attributable to arthritis than people without arthritis.
- The South Carolina Arthritis Program will continue to work to reduce the burden of arthritis in South Carolina and to improve the health and quality of life of people living with arthritis in the state.

What Can Be Done to Prevent and Control Arthritis?

Research shows that physical activity decreases pain, improves function and delays disability.

In addition, research studies suggest that maintaining an ideal body weight and avoiding joint injuries reduces the risk of developing arthritis and may decrease disease progression.

Obtaining an early diagnosis so that appropriate management can be initiated may improve the quality of life for people with arthritis.

Early diagnosis and appropriate management of arthritis, including self-management activities such as self-help courses, weight control, and physical activity can help people with arthritis function better, stay productive, and lower health care costs.

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Promoting and protecting the health of the public and the environment.

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ACKNOWLEDGEMENTS

The South Carolina Arthritis Prevention and Control Program gratefully acknowledges:

Hylan D. Shoob, PhD, MSPH for writing the first draft of the report and developing the charts.

Appreciation is also extended to the following individuals at the South Carolina Department of Health and Environmental Control who contributed to this report:

Patsy Myers, RD, MS, DrPH and Cora Plass, ACSW, LISW for their contributions to the text and for formatting and editing the report.

Beli Dong, MD, MSPH for data analysis.

Gwendolyn Prestidge, ACSW, LISW for her input and suggestions.

Donald Goodwin, MS, DrPH and Michael D. Byrd, MSW, MPH for their overall support of this project.

Kris Black for the cover and internal design.

In addition, we gratefully acknowledge the following individuals for their earlier contributions to the program, which made this report possible:

Julie Lumpkin, BA, South Carolina Department of Health and Environmental Control Melody Crocker-MacRae, MSW, LISW Youjie Huang, MD, DrPH Manxia Wu, MD, MPH

Funding for the SC Arthritis Prevention and Control Program and for this report is provided by the Centers for Disease Control and Prevention.

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